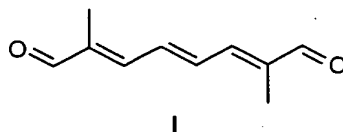


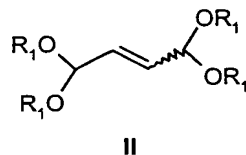
We claim:

1. A process for preparing 2,7-dimethylocta-2,4,6-trienedial of the formula I,

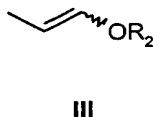


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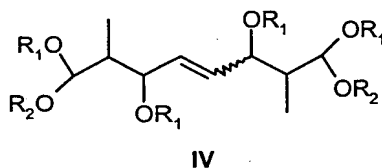
- a) double enol ether condensation of a butenedial bisacetal of the formula II



with an enol ether of the formula III,

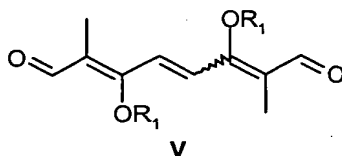


in the presence of a Lewis acid catalyst to give a condensation product of the formula IV,



where the radicals R_1 and R_2 in formulae II to IV are independently of one another C_1 - C_6 -alkyl;

- b) hydrolysis of the acetal groups of IV by adding an aqueous acid to form the dialdehyde of the formula V;



- c) conversion of V into the dialdehyde I by reacting with an aqueous base and
- d) crystallization of I from the reaction mixture,

- 5 Wherein process steps a) to d) are carried out in the presence of an inert, water-immiscible organic solvent.
- 10 2. The process according to claim 1, wherein toluene is used as solvent in all of process steps a) to d).
- 15 3. The process according to claim 1 or 2, wherein the double enol ether condensation in process step a) is carried out in the presence of ZnCl_2 , BF_3 etherate or FeCl_3 or of mixtures thereof.
- 20 4. The process according to claim 3, wherein anhydrous FeCl_3 is employed as Lewis acid catalyst.
5. The process according to any of claims 1 to 4, wherein aqueous sulfuric, nitric, phosphoric or hydrohalic acid or mixtures thereof are employed for the acetal cleavage in process step b).
- 25 6. The process according to claim 5, wherein aqueous sulfuric acid is used.
7. The process according to any of claims 1 to 6, wherein aqueous solutions of alkali metal or alkaline earth metal hydroxides, carbonates or bicarbonates are employed for the elimination reaction in process step c).
- 30 8. The process according to claim 7, wherein an aqueous sodium bicarbonate solution is used.